



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/500,897	02/09/2000	Shunpei Yamazaki	SEL 161	3195
7590 09/08/2008				
Mark J Murphy				
Cook Alex Mcfarron Manzo Cummings & Mehler LTD				
200 West Adams Street Suite 2850				
Chicago, IL 60606				
EXAMINER				
MISLEH, JUSTIN P				
ART UNIT		PAPER NUMBER		
2622				
MAIL DATE		DELIVERY MODE		
09/08/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/500,897

Applicant(s)

YAMAZAKI ET AL.

Examiner

JUSTIN P. MISLEH

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 32, 34 - 38, 40, 41, 48 - 50, 52, 53, 54 - 56, 58, 59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 32, 34 - 38, 40, 41, 48 - 50, 52, 53, 54 - 56, 58, 59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 30, 2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to independent Claims 1, 36, 48, and 54 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3, 32, 34, 35, 48 – 50, 52, and 53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara (US 6,219,113 B1) in view of Nishio et al. (US 6,046,547) in further view of Nishiguchi (US 6,046,787).

The Examiner respectfully notes the only difference between Claims 1 and 48 is that Claim 1 requires, *inter alia*, “a camera comprising: a body of the camera; and an electroluminescence display device attached to the body, the electroluminescence display device” and Claim 48 requires, *inter alia*, “a camera comprising: a body of the camera; and a view finder including an electroluminescence display device attached to the body, the electroluminescence display device”. Claim 48 appears to fully encompass Claim 1 – accordingly, they will be rejected together using the language of Claim 48.

5. For **Claims 1 and 48**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), a camera comprising: a body of the camera (2186); and a view finder (see figure 219) including a display device (22) attached to the body. Takahara further discloses, as stated in column 30 (lines 51 – 65), wherein the display device (22) may be an electroluminescence display device (“the present invention is not limited to the active matrix display panel ... [the] technical idea of the present invention ... is applicable to ... an organic EL display panel”).

While Takahara shows a camera having a view finder with an electroluminescence display device, Takahara does not disclose the construction or the internal components of the electroluminescence display device. Accordingly, Takahara does not necessarily disclose a substrate, a thin film transistor, a planarizing film, a first electrode, and emission layer, and a second electrode.

On the other hand, Nishio et al. also disclose an electroluminescence display device. More specifically, Nishio et al. disclose, as shown in figure 1B and as stated in column 5 (line 20) – column 6 (line 65), an electroluminescence display device comprising: a substrate (1)

having a first surface (upper surface – towards top of figure) and a second surface (lower surface – towards bottom of figure) wherein the second surface is on an opposite side of the substrate with respect to the first surface (clearly seen in figure 1B); a thin film transistor (3a, 3b, and 3c) formed over the first surface of the substrate (clearly seen in figure 1B); a planarizing film (14) formed over the thin film transistor (see column 5, lines 53 – 61), the planarizing film (14) comprising a resin (see column 5, lines 53 – 61) and having a planarized upper surface so as to reduce a step caused by at least the thin film transistor on a surface of the planarizing film (see column 5, lines 53 – 61); a first electrode (pixel electrode 2) formed on the planarizing film (14) and electrically connected to the thin film transistor (see column 4, lines 62 – 66); an emission layer (5) formed over the first electrode (2; clearly seen in figure 1B); a second electrode (common electrode 4) formed over the emission layer (clearly seen in figure 1B).

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the construction of the electroluminescence display device (as taught by Nishio et al.) in the camera view finder having an electroluminescence display device (as disclosed by Takahara) for the advantage of forming luminescent pixel elements without decreasing the light emitting area of each of the luminescent pixel elements (see Nishio et al., column 2, lines 2 – 4).

However, Takahara in view of Nishio et al. still do not disclose wherein the second surface of the substrate has a spherical configuration which acts as a lens.

On the other hand, Nishiguchi also disclose a display device having a substrate with two opposing surfaces. Specifically, Nishiguchi teaches, in figure 7, a display device (131) having a substrate (101b) with a first surface (towards the left-side of the figure) and an opposing second

surface (towards the right-side of the figure). Nishiguchi further teaches, in figure 7 and in column 20 (lines 1 – 30), wherein the second surface of the substrate has a spherical configuration which acts as a lens.

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a feature wherein the second surface of the substrate has a spherical configuration which acts as a lens (as taught by Nishiguchi et al.) in the electroluminescence display device (taught in-combination by Takahara in view of Nishio et al.) for the advantage of *ensuring increased width of viewing in left/right directions of an image viewing zone* (see Nishiguchi, column 6, lines 64 – 67).

6. As for **Claims 3 and 49**, Nishio et al. disclose, as stated in column 7 (lines 1 and 2), wherein said emission layer (5) comprises an organic electroluminescence material.
7. As for **Claims 34, 35, 52, and 53**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), providing the electroluminescence display device in a video/digital camera or in a viewfinder of a video/digital camera.
8. As for **Claims 32 and 50**, Nishio et al. disclose wherein said emission layer (5) comprises an organic electroluminescence material; however, Nishio et al. do not disclose wherein said emission layer (5) comprises an inorganic electroluminescence material.

However, the Examiner takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of using an inorganic electroluminescence material in a display device are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have used an inorganic electroluminescence material in the

display device of Nishio et al. for the advantage of *providing a display device with materials that are not subject to degradation and therefore do not limit their use.*

9. **Claims 36 – 38, 40, 41, 54 – 56, 58, and 59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahara (US 6,219,113 B1) in view of Nishio et al. (US 6,046,547) in further view of Hamada (US 6,114,715) in even further view of Nishiguchi (US 6,046,787).

The Examiner respectfully notes the only difference between Claims 36 and 54 is that Claim 36 requires, *inter alia*, “a camera comprising: a body of the camera; and an electroluminescence display device attached to the body, the electroluminescence display device” and Claim 54 requires, *inter alia*, “a camera comprising: a body of the camera; and a view finder including an electroluminescence display device attached to the body, the electroluminescence display device”. Claim 54 appears to fully encompass Claim 36 – accordingly, they will be rejected together using the language of Claim 54.

10. For **Claims 36 and 54**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), a camera comprising: a body of the camera (2186); and a view finder (see figure 219) including a display device (22) attached to the body. Takahara further discloses, as stated in column 30 (lines 51 – 65), wherein the display device (22) may be an electroluminescence display device (“the present invention is not limited to the active matrix display panel ... [the] technical idea of the present invention ... is applicable to ... an organic EL display panel”).

While Takahara shows a camera having a view finder with an electroluminescence display device, Takahara does not disclose the construction or the internal components of the

electroluminescence display device. Accordingly, Takahara does not necessarily disclose a substrate, a thin film transistor, a planarizing film, a first electrode, and emission layer, and a second electrode.

On the other hand, Nishio et al. also disclose an electroluminescence display device. More specifically, Nishio et al. disclose, as shown in figure 1B and as stated in column 5 (line 20) – column 6 (line 65), an electroluminescence display device comprising: a substrate (1) having a first surface (upper surface – towards top of figure) and a second surface (lower surface – towards bottom of figure) wherein the second surface is on an opposite side of the substrate with respect to the first surface (clearly seen in figure 1B); a thin film transistor (3a, 3b, and 3c) formed over the first surface of the substrate (clearly seen in figure 1B); a planarizing film (14) formed over the thin film transistor (see column 5, lines 53 – 61), the planarizing film (14) comprising a resin (see column 5, lines 53 – 61) and having a planarized upper surface so as to reduce a step caused by at least the thin film transistor on a surface of the planarizing film (see column 5, lines 53 – 61); a first electrode (pixel electrode 2) formed on the planarizing film (14) and electrically connected to the thin film transistor (see column 4, lines 62 – 66); an emission layer (5) formed over the first electrode (2; clearly seen in figure 1B); a second electrode (common electrode 4) formed over the emission layer (clearly seen in figure 1B).

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included the construction of the electroluminescence display device (as taught by Nishio et al.) in the camera view finder having an electroluminescence display device (as disclosed by Takahara) for the advantage of forming luminescent pixel

elements without decreasing the light emitting area of each of the luminescent pixel elements (see Nishio et al., column 2, lines 2 – 4).

However, Takahara in view of Nishio et al. still do not disclose (a) wherein the thin film transistor has an LDD region and a gate electrode partly overlapping the LDD region; and (b) wherein the second surface of the substrate has a spherical configuration which acts as a lens.

In regards to item (a), Hamada also discloses a electroluminescence display device having a thin film transistor. Specifically, Hamada teaches, in figure 8, an electroluminescence display device (41) having a thin film transistor (43). Hamada further teaches, in figure 8 and in column 7 (line 62) – column 8 (line 41), wherein the thin film transistor (41) has an LDD region and a gate electrode (46) partly overlapping the LDD region (clearly seen in figure 8).

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a feature wherein the thin film transistor has an LDD region and a gate electrode partly overlapping the LDD region (as taught by Hamada) in the electroluminescence display device (taught in-combination by Takahara in view Nishio et al.) for the advantage of *increasing the ON/OFF ratio of the TFT and to suppress leak current in the OFF state* (see Hamada, column 9, lines 17 – 20).

In regards to item (b), Nishiguchi also disclose a display device having a substrate with two opposing surfaces. Specifically, Nishiguchi teaches, in figure 7, a display device (131) having a substrate (101b) with a first surface (towards the left-side of the figure) and an opposing second surface (towards the right-side of the figure). Nishiguchi further teaches, in figure 7 and in column 20 (lines 1 – 30), wherein the second surface of the substrate has a spherical configuration which acts as a lens.

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a feature wherein the second surface of the substrate has a spherical configuration which acts as a lens (as taught by Nishiguchi et al.) in the electroluminescence display device (taught in-combination by Takahara in view Nishio et al. – as modified by Hamada) for the advantage of *ensuring increased width of viewing in left/right directions of an image viewing zone* (see Nishiguchi et al., column 6, lines 64 – 67).

11. As for **Claims 37 and 55**, Nishio et al. disclose, as stated in column 7 (lines 1 and 2), wherein said emission layer (5) comprises an organic electroluminescence material.

12. As for **Claims 40, 41, 58, and 59**, Takahara discloses, as shown in figures 218 and 219 and as stated in column 122 (line 37) – 123 (line 16), providing the electroluminescence display device in a video/digital camera or in a viewfinder of a video/digital camera.

13. As for **Claims 38 and 56**, Nishio et al. disclose wherein said emission layer (5) comprises an organic electroluminescence material; however, Nishio et al. do not disclose wherein said emission layer (5) comprises an inorganic electroluminescence material.

However, the Examiner takes **Official Notice** (MPEP § 2144.03) that both the concepts and advantages of using an inorganic electroluminescence material in a display device are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have used an inorganic electroluminescence material in the display device of Nishio et al. for the advantage of *providing a display device with materials that are not subject to degradation and therefore do not limit their use*.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Sinh Tran can be reached on 571.272.7564. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/
Primary Examiner
Group Art Unit 2622
September 10, 2008**